WEST Search History

DATE: Wednesday, March 05, 2003

Set Name side by side	Query	Hit Count	Set Name result set
DB=USPT,JPAB,EPAB,DWPI,TDBD; PLUR=YES; OP=OR			
L3	L2 and (proliposom$ or preliposom$)	1	L3
L2	L1 and liposome$	63	L2
L1	(salicyl$) same (xanthine$ or caffeine)	424	L1

END OF SEARCH HISTORY

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L2: Entry 37 of 63 File: USPT Jan 4, 2000

DOCUMENT-IDENTIFIER: US 6011067 A
TITLE: Antioxidant composition for the treatment of psoriasis and related diseases

Brief Summary Text (11):
Various novel therapies for psoriasis have recently been disclosed, albeit none address the issue of inflammation and free radicals ameliorated by the synergistic antioxidant complex of the present patent application. Quarles in U.S. Pat. No. 5,776,920 dated Jul. 7, 1998, teaches a preparation of salicylic acid, lactic acid, and urea in a moisturizing medium useful as topicals for psoriatic lesions applied once daily for four days. Braiman, using his own psoriasis affected skin, teaches the use of isomers of retinoic acid, namely II-cis-retinoic acid, as a therapeutic agent in U.S. Pat. No. 5,719,195 dated Feb. 17, 1998. Braiman teaches synthesis of neotretinoin as well as a way to irradiate a gel with retinoic acid to create this therapeutic isomer. Winkler and co-workers in U.S. Pat. No. 5,648,373 dated Jul. 15, 1997 teach the use of enzyme inhibitors to block the production of inflammatory mediators (the arachidonic acid cascade). These inhibitory compounds together with co-enzyme A-independent transacylase are purportedly useful in a variety of allergic and inflammatory disorders. Furthermore, the use of omeprazole in the therapy of these skin maladies is disclosed by Hasselkuss in U.S. Pat. No. 5,714,505 dated Feb. 3, 1998. U.S. Pat. No. 5,565,542 dated Oct. 15, 1996 by Eitan and collaborators teach the use of xanthine derivatives, namely, pentoxifylline, propentofylline and torbarylline, as topicals for psoriasis and atopic dermatitis. Medford teaches in U.S. Pat. No. 5,783,596 dated Jul. 21, 1998 the use of dithiolarxy-lates, especially dithiocarbamates as therapies for inflammatory diseases by blocking the induced expression of the endothelial cell surface adhesion molecule VCAM-1 and is thus also of value in treating atherosclerosis and related complications.

Brief Summary Text (48):
Ascorbic acid, vitamin C, plays a significant role in skin metabolism and in synthesis of collagen as a co-factor in hydroxylation reactions for the formation and function of collagen. High vitamin C levels not only stimulate collagen but also reverse epidermal thinning and offer skin protection against ultraviolet rays. These properties of vitamin C are enhanced by using glucosamine where the polyamine complex protects the ascorbic acid, enhancing the antioxidant and anti-collagenase properties of these products. Vitamin C in protective liposomes or other micro-encapsulated lotion techniques may also be used.

Brief Summary Text (51):
Vitamins C and E not only work together as antioxidants in hydrophilic and hydrophobic areas of cells and cell membranes, but also work synergistically with reduced glutathione and the glutathione cascade, including selenium dependent glutathione peroxidase, and superoxide dismutase. Further beneficial pharmacologic effects are additive by using these in protective and enhancing encapsulating reservoir molecules, such as liposomes, nanospheres, glycospheres and others well known to those in the industry.

Detailed Description Paragraph Table (1):
Ingredients Percent
1. L-glutathione (reduced) 0.20 2. L-selenomethionine 0.05 3. N-acetyl-L-cysteine 0.25 4. A,C,E Liposome 2.50 5. Superoxide dismutase 0.25 6. Zinc pyrithione 0.25

Detailed Description Paragraph Table (2):

1. L-glutathione (reduced) 0.20 2. L-selenomethionine 0.05 3. N-acetyl-L-cysteine 0.25 4. A,C,E Liposome 2.50 5. Superoxide dismutase 0.25 6. Zinc pyrithione 0.25

Detailed Description Paragraph Table (3):

1. L-glutathioine (reduced) 0.20 2. L-selenomethionine 0.025 3. N-acetyl-L-cysteine 0.25 4. A,C,E Liposome 2.00 5. Superoxide dismutase 0.10 6. Dex-panthenol 0.5 7. Zinc pyrithione 1.0

CLAIMS:

13. The composition of claim 1 wherein said protective membranes are selected from the group consisting of liposomes, nanospheres and glycospheres.

29. The method of claim 17 wherein said protective membranes are selected from the group consisting of liposomes, nanospheres and glycospheres.

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L2: Entry 45 of 63 File: USPT Dec 1, 1998

DOCUMENT-IDENTIFIER: US 5843476 A
TITLE: Slimming composition for topical treatment, containing two types of liposomes, and use thereof

Brief Summary Text (10):
Many examples are known of cosmetic or dermatological compositions intended for treating the skin, which have one or more active agents that are suitable for treating the skin and which are encapsulated in lipid spherules or vesicles (also known as liposomes).

Brief Summary Text (31):
Glucose is a labelling agent conventionally used for this type of determination (see in particular, Liposomes a practical approach by R. R. C. New, IRL Press, pp. 125-136 (1990)).

Brief Summary Text (56):
Measurement of the diffusion constant D is carried out by combining two methods using a paramagnetic probe, ASL: one-dimensional and periodic electron paramagnetic resonance (EPR), on the one hand, and EPR kinetic imaging, on the other hand. These two methods are respectively described in the articles "Evaluation of liposomes as drug carriers into the skin by one-dimensional EPR imaging" by V. Gabrijelcic et al., International Journal of Pharmaceutics, vol. 62, pp. 75-79, Elsevier (1990), and "Liposome entrapped molecules penetration into the skin measured by nitroxide reduction kinetic imaging" by V. Gabrijelcic et al., Periodicum Biologorum, vol. 93, No. 2, pp. 245-246 (1991).

Brief Summary Text (57):
Measurement of the degree of encapsulation is carried out as described in the Liposomes a practical approach, by R. R. C. New, IRL Press, pp. 125-136 (1990) cited above, and that of the phase transition temperature is carried out as described above.

Detailed Description Text (14):
3. Production of the "double-liposome" composition.

Detailed Description Text (18):
Example 1. Double-liposome slimming cream.

Detailed Description Text (20):
Example 2: Double-liposome slimming cream.

Detailed Description Text (22):
Example 3: Double-liposome slimming cream.

Detailed Description Paragraph Table (1):
Preparation A: Liposomes with deep-down action: Triglyceryl cetyl ether 7.6 g Cholesterol 7.6 g Sodium acylglutamate 0.8 g Asiatic acid (active agent) 0.2 g Nipagine (preserving agent) 0.1 g Demineralized water qs 100 g Preparation B: Liposome active at the surface: Chimexane NS/dimyristyl phosphate in a 20.0 g 95/5 weight ratio Salicyclic acid (active agent) 2.0 g Glycerine (active agent) 15.0 g Nipagine (preserving agent) 0.2 g Demineralized water qs 100 g Double-lipsome composition: Preparation A 12.5 g Preparation B 10.0 g Oils

(vegetable oils and silicone oils) 8.6 g Plant extracts 4.1 g Preserving agents 0.7 g Carboxyvinyl polymer (gelling agent) 0.9 g Sodium hydroxide 1.8 g Demineralized water qs 100 g

Detailed Description Paragraph Table (2):

Preparation A: Lipsomes with deep-down action: PEG 8 stearate 7.6 g Cholesterol 7.6 g Sodium acylglutamate 0.8 g Caffeine (active agent) 3.0 g 98% Triethanolamine (neutralizing agent) 1.5 g Salicylic acid 1.3 g Methylparaben (preserving agent) 0.1 g Demineralized water qs 100 g Preparation B: Liposomes active at the surface: Chimexane NS 20.0 g Glycerine (active agent) 15.0 g 5-n-Octanoylsalicylic acid (active agent) 2.0 g Methylparaben (preserving agent) 0.2 g Demineralized water qs 100 g Double-liposome composition: Preparation A 12.5 g Preparation B 10.6 g Oils (vegetable oils and silicone oils) 8.6 g Carboxyvinyl polymer (gelling agent) 0.9 g Sodium hydroxide 1.8 g Preserving agents 0.5 g Demineralized water qs 100 g

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L2: Entry 48 of 63 File: USPT Feb 10, 1998

DOCUMENT-IDENTIFIER: US 5716638 A
TITLE: Composition for applying active substances to or through the skin

Brief Summary Text (10):
Preparation of liposomal systems involves the use of organic solvents such as chloroform, alcohols and others. The prior art teaches away from high concentrations of alcohol in the final liposomal preparations. In some methods of preparation, an organic phospholipid solution is evaporated to form a lipidic film, which is then hydrated to give an aqueous vesicular system (Riaz et al., 1988). In alternative methods, liposomes are prepared by injecting an ethanolic solution of lipid into an aqueous solution, resulting in a dilute ethanolic solution (2.5-7.5% ethanol)(Batzri et al., 1973) or by dilution of proliposomes (Leigh, 1991). The alcohol, is then removed by different means such as dialysis (Kremer et al, 1977) or is diluted. The alcohol, if present is in low concentrations only, less than about 20% in the final product (e.g. 7.5%, Kremer et al, 1977; Leigh, 1991).

Brief Summary Text (13):
An important characteristic of ethosomes is enhanced membrane permeability for various compounds. Ethosomal systems, vesicular in nature, depending on the ratio of the components and the chemical structure of the phospolipids, can be comprised of very small entities (nm's) up to larger vesicles (mm's) (see Tables 3-5). High alcoholic (organic solvent) concentration favors the production of ethosomes in nm's range while high aqueous and phospholipid concentrations favor the formation of large size ethosomes. As examples, formulation 509(Table 4) containing 60% organic solvent and 38% water has a mean population of tens of nm's, while formulation 510 containing 50% organic solvent and 48% water has a mean population of 1 mm. In system 509 the concentration of ethanol was 48% while in formulation 510 the ethanol concentration is only 20%. showing that the alcohol concentration is of great importance in determining vesicle size. The phospholipids which can be used are: phosphatidylcholine (PC), phosphatidylserine (PS), phosphatidic acid (PA), phosphatidylethanolamine (PE), phosphatidylglycol (PPG), hydrogenated PC and others. Some prefered phospholipids are soya phospholipids such as Phospholipon 90 (PL-90). The concentration of phospholipid ranges between about 0.5-10% w/w. Cholesterol at concentrations ranging between about 0.1-1% can also be added to the preparation. Examples of alcohols which can be used are: ethanol and isopropyl alcohol. Examples of glycols are propylene glycol and Transcutol.RTM.. The source of the phospholipids can be egg, soybean, semi-synthetics, and synthetics. Non ionic surfactants can be combined with the phospholipids in these preparations e.g. PEG-alkyl ethers (Brij-52). Cationic lipids like cocoamide, Poe alkyl amines, dodecylamine, cetrimide, and like. The concentration of alcohol (EtOH etc.) in the final product ranges from about 20-50%. The concentration of the non-aqueous phase (alcohol and glycol combination) may range between about 22 to 70%. The rest of the carrier contains water and possible additives. Vesicle formation is dependent on the water: alcohol ratio. This ratio is kept constant in the product, therefore, no changes in the entities population occur. Nevertheless, penetration and evaporation of the alcohol following application to the skin allows the transition from small vesicles to a larger ones, finally resulting in film formation. In contrast to the present state of the art where "tough" liposomes accomplished by addition of different substances like cholesterol to the phospholipids and in absence of alcohol, this invention relates to "soft" vesicles, that can be easily formed in a hydroalcoholic medium. One of the important properties of these systems is that small entities can penetrate into the skin, while larger vesicles can form a reservoir in the skin and a film on the skin

surface as a result of solvent evaporation taking place after the application. These carriers can be used to deliver various active agents such as: peptides, anti-aging, tanning agents, vitamins, antiviral drugs, psoriasis treatment agents, melanin, melatonin, hormones, medicinally active components of plants such as oleoresins, volatile oils, glycosides, alkaloides, terpenes and others.

Brief Summary Text (25):
Size Distribution of Liposomes:

Brief Summary Text (79):
There were prepared: Caffeine ethosomes (liposomal systems containing 20.9 and ;35% ethanol) versus Caffeine liposomes with 5% ethanol.

Brief Summary Text (87):
A) Dissolve Caffeine and Sod. Salicylate in the water.

Brief Summary Text (92):
These results clearly indicate that the ethosomal system according to the invention containing 35% ethanol enabled an enhanced delivery of caffeine through the skin of 53 times higher than the liposomes containing caffeine with 5% ethanol. The above proves the outstanding improvement resulting from a high content of alcohol in the liposomal system, in the presence of liposomes.

Brief Summary Text (93):
An increase of skin penetration from 87 .mu.g/cm2to about 4794 .mu.g/cm.sup.2, i.e., an increase by a factor of about 53 times as large, demonstrates a dramatic and unexpected result of the novel liposomes with a high ethanol content, termed "ethosomes". A 53-fold skin penetration could not be expected at all on the basis of the prior art, which clearly teaches away from the present invention, i.e. that a high ethanol content is detrimental for liposomal preparations, and that the ethanol content of the final liposome preparation ought to be reduced so as to remove a large part of the initial ethanol content or by dilution.

Brief Summary Text (95):
Further experiments were carried out with Minoxidil, comparing liposomes with a high ethanol content with Minoxidil in the vehicle.

Brief Summary Text (103):
The above results, of about 16 .mu.g/cm.sup.2 versus about 64 pg/cm.sup.2 skin penetration of the two preparations, demonstrates that the "ethosomes" of the invention resulted in an about 4-fold skin penetration compared with the penetration of the active substance in the vehicle only, i.e. not in liposome form. These ethosomes were without propylene glycol.

Brief Summary Text (105):
The following experimental results, relate to various liposome systems of the invention containing 1% sodium diclofenac as model drug and in which various compositional factors have been changed: 1. the concentration of alcohol 2. the phospholipid 3. the type of alcohol. The results demonstrate: 1. the cruciality of high concentrations of alcohol, and that the high skin permeation from ethosomal systems of the invention is still obtained: 2. with an additional example of phospholipid (Lipold E 75-containing phosphatidyl ethanolamine and phosphatidyl choline isolated from egg, produced by Lipold KG; Germany, 3, with isopropyl alcohol,

Brief Summary Paragraph Table (16):

	Caffeine Ethosomes
	A) Caffeine 3.0% Sod. Salicylate 4.8%
Distilled Water 52.2%	B) Phospholipon-90 5.0% Ethanol 35.0%

Brief Summary Paragraph Table (17):

	Caffeine Liposomes
	Caffeine 3.0% Sod. Salicylate 4.8%
Phospholipon-90 5.0% Ethanol 5% Distilled Water 82.2%	

Detailed Description Text (7):
Size Distribution of Liposomes:

Detailed Description Text (16):
2. Batzri, S. and Korn, E. D. Single bilayer liposomes prepared without sonication. Biochim. Biophys. Acta 298 1973) 1015-1019.

Detailed Description Text (18):
4.Leigh, S., Pro-liposome compositions, U.S. Pat. No. 5,004,611, Apr. 2, 1991.

Other Reference Publication (2):
Touitou et al., Journal of Pharmaceutical Sciences, Liposomes as Carriers for . . . , vol. 83, No. 9, Sep. 1994.

Other Reference Publication (3):
Riaz et al., Riaz, Weinr, and Martin, Liposomes, Chapter 16, pp. 568-603.

Other Reference Publication (4):
Batzri et al., Single Bilayer Liposomes Prepared Without Sonication, Biochim.Biophys.Acta. 298 (1973) 1015-1019.

Other Reference Publication (9):
Joachim Roding, Natipide II: New Easy Liposome System, Lecture held at In-Cosmetics 6-8 Mar. 1990, Birmingham.

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L2: Entry 49 of 63 File: USPT Jun 10, 1997

DOCUMENT-IDENTIFIER: US 5637316 A
TITLE: Slimming composition for topical treatment, containing two types of liposomes, and use thereof

Brief Summary Text (10):
Many examples are known of cosmetic or dermatological compositions intended for treating the skin, which have one or more active agents that are suitable for treating the skin and which are encapsulated in lipid spherules or vesicles (also known as liposomes).

Detailed Description Text (8):
Glucose is a labelling agent conventionally used for this type of determination (see in particular, Liposomes a practical approach by R.R.C. New, IRL Press, pp. 125-136 (1990)).

Detailed Description Text (33):
Measurement of the diffusion constant D is carried out by combining two methods using a paramagnetic probe, ASL: one-dimensional and periodic electron paramagnetic resonance (EPR), on the one hand, and EPR kinetic imaging, on the other hand. These two methods are respectively described in the articles "Evaluation of liposomes as drug carriers into the skin by one-dimensional EPR imaging" by V. Gabrijelcic et al., International Journal of Pharmaceutics, vol. 62, pp. 75-79, Elsevier (1990), and "Liposome entrapped molecules penetration into the skin measured by nitroxide reduction kinetic imaging" by V. Gabrijelcic et al., Periodicum Biologorum, vol. 93, No. 2, pp. 245-246 (1991).

Detailed Description Text (34):
Measurement of the degree of encapsulation is carried out as described in the Liposomes a practical approach, by R.R.C. New, IRL Press, pp. 125-136 (1990) cited above, and that of the phase transition temperature is carried out as described above.

Detailed Description Text (65):
3. production of the "double-liposome" composition

Detailed Description Text (70):
Double-liposome slimming cream

Detailed Description Text (73):
Double-liposome slimming cream

Detailed Description Text (76):
Double-liposome slimming cream

Detailed Description Paragraph Table (2):
Preparation A: Liposomes with deep-down action: Triglyceryl cetyl ether 7.6 g Cholesterol 7.6 g Sodium acylglutamate 0.8 g Asiatic acid (active agent) 0.2 g Nipagine (preserving agent) 0.1 g Demineralized water qs 100 g Preparation B: Liposomes active at the surface: Chimexane NS/dimyristyl phosphate in a 20.0 g 95/5 weight ratio Salicylic acid (active agent) 2.0 g Glycerine (active agent) 15.0 g Nipagine (preserving agent) 0.2 g Demineralized water qs 100 g Double-liposome composition: Preparation A 12.5 g Preparation B 10.0 g

Oils (vegetable oils and silicone oils) 8.6 g Plant extracts 4.1 g Preserving agents 0.7 g Carboxyvinyl polymer (gelling agent) 0.9 g Sodium hydroxide 1.8 g Demineralized water qs 100 g

Detailed Description Paragraph Table (3):

Preparation A: Liposomes with deep-down action: PEG 8 stearate 7.6 g Cholesterol 7.6 g Sodium acylglutamate 0.8 g Caffeine (active agent) 3.0 g 98% Triethanolamine (neutralizing agent) 1.5 g Salicylic acid 1.3 g Methylparaben (preserving agent) 0.1 g Demineralized water qs 100 g Preparation B: Liposomes active at the surface: Chimexane NS 20.0 g Glycerine (active agent) 15.0 g 5-n-Octanoylsalicylic acid (active agent) 2.0 g Methylparaben (preserving agent) 0.2 g Demineralized water qs 100 g Double-liposome composition: Preparation A 12.5 g Preparation B 10.6 g Oils (vegetable oils and silicone oils) 8.6 g Carboxyvinyl polymer (gelling agent) 0.9 g Sodium hydroxide 1.8 g Preserving agents 0.5 g Demineralized water qs 100 g

Other Reference Publication (1):

International Journal Of Pharmaceutics, vol. 62, No. 1, Jul. 15, 1990, Elsevier NL, pp. 75-79, V. Gagrijelcic et al., "Evaluation of liposomes as drug carriers into the skin by one-dimensional epr imaging," p. 78, col. 2, table 2, p. 79, col. 1, paragraphs 2 and 3.

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L2: Entry 52 of 63 File: USPT Mar 25, 1997

DOCUMENT-IDENTIFIER: US 5614215 A
TITLE: Cosmetic composition for the simultaneous treatment of the surface and deep layers of the skin, its use

Brief Summary Text (6):
Many examples are known of cosmetic or dermatological compositions intended for the treatment of the skin, which have one or a number of active substances that are suitable for the treatment of the skin, encapsulated in lipid vesicles or spherules (also called liposomes).

Detailed Description Text (8):
Glucose is a marker traditionally employed for this type of determination (cf. especially "Liposomes, a practical approach" by R.R.C. New, IRL Press (1990), p. 125-136).

Detailed Description Text (33):
The measurement of the diffusion constant D is performed by a combination of two methods employing a paramagnetic probe, ASL: on the one hand, one-dimensional and periodic electron paramagnetic resonance (EPR) and, on the other hand, kinetic EPR imagery. These two methods are described in the following papers: "Evaluation of liposomes as drug carriers into the skin by one-dimensional EPR imaging" by V. Gabrijelcic et al., International Journal of Phamaceutics, 62 (1990) p. 75-79, Elsevier, and "Liposome entrapped molecules penetration into the skin measured by nitroxide reduction kinetic imaging" by V. Gabrijelcic et al., Periodicum Biologorum, vol. 93, No. 2, p. 245-246 (1991).

Detailed Description Text (34):
The measurement of the encapsulation ratio is performed as described in "Liposomes, a practical approach" by R. R. C. New, IRL Press (1990), p. 125-136, and that of the phase transition temperature as described above.

Detailed Description Text (41):
In the case of slimming, at least one keratolytic agent or an alpha-hydroxyacid such as salicylic acid or 5-n-octanoylsalicylic acid encapsulated in the surface vesicles is used for example in combination with at least one liporegulating agent such as caffeine, encapsulated in the depth vesicles.

Detailed Description Text (65):
3. Preparation of the "double liposomes" composition

Detailed Description Text (69):
EXAMPLE I: Depigmenting, double liposomes cream

Detailed Description Text (70):
EXAMPLE 2: Depigmenting, double liposomes cream

Detailed Description Text (72):
EXAMPLE 3: Anti-wrinkle, double liposomes cream

Other Reference Publication (1):
Soap, Cosmetics, Chemical Specialties, vol. 69, No. 7, Jul., 1993, US p. 77 "formulation ideas" Liposome eye treatment.

Other Reference Publication (2):
International Journal of Pharmaceutics, vol. 62, No. 1, 1990, NL pp. 75-79, Gabrijelcic et al. "Evaluation of Liposomes as drug carriers into the skin by one-dimensional epr imaging".

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End of Result Set

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L3: Entry 1 of 1 File: USPT Feb 10, 1998

DOCUMENT-IDENTIFIER: US 5716638 A
TITLE: Composition for applying active substances to or through the skin

Brief Summary Text (10):
Preparation of liposomal systems involves the use of organic solvents such as chloroform, alcohols and others. The prior art teaches away from high concentrations of alcohol in the final liposomal preparations. In some methods of preparation, an organic phospholipid solution is evaporated to form a lipidic film, which is then hydrated to give an aqueous vesicular system (Riaz et al., 1988). In alternative methods, liposomes are prepared by injecting an ethanolic solution of lipid into an aqueous solution, resulting in a dilute ethanolic solution (2.5-7.5% ethanol) (Batzri et al., 1973) or by dilution of proliposomes (Leigh, 1991). The alcohol, is then removed by different means such as dialysis (Kremer et al, 1977) or is diluted. The alcohol, if present is in low concentrations only, less than about 20% in the final product (e.g. 7.5%, Kremer et al, 1977; Leigh, 1991).

Brief Summary Text (13):
An important characteristic of ethosomes is enhanced membrane permeability for various compounds. Ethosomal systems, vesicular in nature, depending on the ratio of the components and the chemical structure of the phospolipids, can be comprised of very small entities (nm's) up to larger vesicles (mm's) (see Tables 3-5). High alcoholic (organic solvent) concentration favors the production of ethosomes in nm's range while high aqueous and phospholipid concentrations favor the formation of large size ethosomes. As examples, formulation 509(Table 4) containing 60% organic solvent and 38% water has a mean population of tens of nm's, while formulation 510 containing 50% organic solvent and 48% water has a mean population of 1 mm. In system 509 the concentration of ethanol was 48% while in formulation 510 the ethanol concentration is only 20%. showing that the alcohol concentration is of great importance in determining vesicle size. The phospholipids which can be used are: phosphatidylcholine (PC), phosphatidylserine (PS), phosphatidic acid (PA), phosphatidylethanolamine (PE), phosphatidylglycol (PPG), hydrogenated PC and others. Some prefered phospholipids are soya phospholipids such as Phospholipon 90 (PL-90). The concentration of phospholipid ranges between about 0.5-10% w/w. Cholesterol at concentrations ranging between about 0.1-1% can also be added to the preparation. Examples of alcohols which can be used are: ethanol and isopropyl alcohol. Examples of glycols are propylene glycol and Transcutol.RTM.. The source of the phospholipids can be egg, soybean, semi-synthetics, and synthetics. Non ionic surfactants can be combined with the phospholipids in these preparations e.g. PEG-alkyl ethers (Brij-52). Cationic lipids like cocoamide, Poe alkyl amines, dodecylamine, cetrimide, and like. The concentration of alcohol (EtOH etc.) in the final product ranges from about 20-50%. The concentration of the non-aqueous phase (alcohol and glycol combination) may range between about 22 to 70%. The rest of the carrier contains water and possible additives. Vesicle formation is dependent on the water: alcohol ratio. This ratio is kept constant in the product, therefore, no changes in the entities population occur. Nevertheless, penetration and evaporation of the alcohol following application to the skin allows the transition from small vesicles to a larger ones, finally resulting in film formation. In contrast to the present state of the art where "tough" liposomes accomplished by addition of different substances like cholesterol to the phospholipids and in absence of alcohol, this invention relates to "soft" vesicles, that can be easily formed in a hydroalcoholic medium. One of the important properties of these systems is that small entities can penetrate into the

skin, while larger vesicles can form a reservoir in the skin and a film on the skin surface as a result of solvent evaporation taking place after the application. These carriers can be used to deliver various active agents such as: peptides, anti-aging, tanning agents, vitamins, antiviral drugs, psoriasis treatment agents, melanin, melatonin, hormones, medicinally active components of plants such as oleoresins, volatile oils, glycosides, alkaloides, terpenes and others.

Brief Summary Text (25):
Size Distribution of Liposomes:

Brief Summary Text (79):
There were prepared: Caffeine ethosomes (liposomal systems containing 20.9 and ;35% ethanol) versus Caffeine liposomes with 5% ethanol.

Brief Summary Text (87):
A) Dissolve Caffeine and Sod. Salicylate in the water.

Brief Summary Text (92):
These results clearly indicate that the ethosomal system according to the invention containing 35% ethanol enabled an enhanced delivery of caffeine through the skin of 53 times higher than the liposomes containing caffeine with 5% ethanol. The above proves the outstanding improvement resulting from a high content of alcohol in the liposomal system, in the presence of liposomes.

Brief Summary Text (93):
An increase of skin penetration from 87 .mu.g/cm2to about 4794 .mu.g/cm.sup.2, i.e., an increase by a factor of about 53 times as large, demonstrates a dramatic and unexpected result of the novel liposomes with a high ethanol content, termed "ethosomes". A 53-fold skin penetration could not be expected at all on the basis of the prior art, which clearly teaches away from the present invention, i.e. that a high ethanol content is detrimental for liposomal preparations, and that the ethanol content of the final liposome preparation ought to be reduced so as to remove a large part of the initial ethanol content or by dilution.

Brief Summary Text (95):
Further experiments were carried out with Minoxidil, comparing liposomes with a high ethanol content with Minoxidil in the vehicle.

Brief Summary Text (103):
The above results, of about 16 .mu.g/cm.sup.2 versus about 64 pg/cm.sup.2 skin penetration of the two preparations, demonstrates that the "ethosomes" of the invention resulted in an about 4-fold skin penetration compared with the penetration of the active substance in the vehicle only, i.e. not in liposome form. These ethosomes were without propylene glycol.

Brief Summary Text (105):
The following experimental results, relate to various liposome systems of the invention containing 1% sodium diclofenac as model drug and in which various compositional factors have been changed: 1. the concentration of alcohol 2. the phospholipid 3. the type of alcohol. The results demonstrate: 1. the cruciality of high concentrations of alcohol, and that the high skin permeation from ethosomal systems of the invention is still obtained: 2. with an additional example of phospholipid (Lipold E 75-containing phosphatidyl ethanolamine and phosphatidyl choline isolated from egg, produced by Lipold KG; Germany, 3, with isopropyl alcohol,

Brief Summary Paragraph Table (16):

	Caffeine Ethosomes
	A) Caffeine 3.0% Sod. Salicylate 4.8%
Distilled Water 52.2% B) Phospholipon-90 5.0% Ethanol 35.0%	

Brief Summary Paragraph Table (17):

	Caffeine Liposomes
	Caffeine 3.0% Sod. Salicylate 4.8%

Phospholipon-90 5.0% Ethanol 5% Distilled Water 82.2%

Detailed Description Text (7):
Size Distribution of Liposomes:

Detailed Description Text (16):
2. Batzri, S. and Korn, E. D. Single bilayer liposomes prepared without sonication. Biochim. Biophys. Acta 298 1973) 1015-1019.

Detailed Description Text (18):
4.Leigh, S., Pro-liposome compositions, U.S. Pat. No. 5,004,611, Apr. 2, 1991.

Other Reference Publication (2):
Touitou et al., Journal of Pharmaceutical Sciences, Liposomes as Carriers for . . . , vol. 83, No. 9, Sep. 1994.

Other Reference Publication (3):
Riaz et al., Riaz, Weinr, and Martin, Liposomes, Chapter 16, pp. 568-603.

Other Reference Publication (4):
Batzri et al., Single Bilayer Liposomes Prepared Without Sonication, Biochim.Biophys.Acta. 298 (1973) 1015-1019.

Other Reference Publication (9):
Joachim Roding, Natipide II: New Easy Liposome System, Lecture held at In-Cosmetics 6-8 Mar. 1990, Birmingham.